TEG EXHIBIT
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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

MAX MINDS, LLC,	)
	)
Plaintiff,	)
	)
v.	) Case No.: 1:24-cv-00779-JPH-MG
	)
TRIANGLE EXPERIENCE GROUP, INC., et al.,	)
	)
Defendants.	)

DECLARATION OF NICK FERRARA

I, Nick Ferrara, declare as follows:

1.   I am a senior IT litigation consultant employed by DisputeSoft, an independent consulting

firm in North Bethesda, Maryland specializing in software dispute consulting, e-discovery and

computer forensics. I have been retained by Bean Kinney & Korman PC, counsel for Defendant

Triangle Experience Group, Inc. ("TEG") through DisputeSoft as an expert in connection with this

case.

2.   I have approximately 20 years' experience in the information technology field, including

consulting work, IT management, staffing, and systems administration. While at DisputeSoft, I have

consulted on more than 100 matters and have been engaged as an expert in state, national, and

international jurisdictions. I have testified both in U.S. federal courts and before the American

Arbitration Association.

3.   My experience as a consultant at DisputeSoft includes in-depth technical analysis of software

projects, source code, and IT systems for clients across numerous industries, including government,

finance, health care, pharmaceutical, energy production, insurance, construction, advertising,

transportation, and retail. I have conducted dozens of code reviews of computer programs and web

solutions written in numerous programming languages and have performed source code comparisons in numerous cases involving claims of copyright infringement and trade secret misappropriation.

4.   In addition to my work as an expert for DisputeSoft, I serve as DisputeSoft's Director of Software Development, a role in which I am responsible for the management and development of complex software projects, including work in software architectural design, requirements elaboration, software development, configuration management, testing and quality control, and implementation. As a result of my work, both as an engineer and consultant, I am thoroughly familiar with current standards, practices, and trends in the software development industry.

5.   I am a certified computer forensics examiner, holding the "EnCase Certified Examiner" ("EnCE") certification, a well-known forensics certification widely used by law enforcement and private entities who conduct investigations and proffer testimony in a court setting. As a certified forensics examiner, I have received detailed training in how computer systems store and manage data and how such data is analyzed.

6.   I understand from counsel that Plaintiff Max Minds, LCC ("Max") have moved to modify or clarify the Magistrate Judge's Order (ECF74) with respect to TEG's request for production #6, which requests "Native copies of all source code repositories containing source code for the Software, organized from earliest to latest version." I have been asked by TEG's counsel to address several technical points at issue with respect to the production of the source code.

A.   MAX SHOULD BE ABLE TO PRODUCE ITS SOURCE CODE WITH LESS THAN A DAY OF EFFORT

7.   I understand Max takes the position that the burden of producing its repositories is "massive."[1] However, as a technical matter, production of native copies of Max's repositories could probably be accomplished with no more than a day of effort.

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[1] Motion for Modification or Clarification, p. 2 ("Max has determined that the burden on Max is massive and significantly outweighs the relevancy of 'all source code repositories'".)

8.   A "source code repository" is a database that tracks all changes made to a set of source code

files over time, including details such as what the changes were, who made the changes, and when.

Based on Exhibit 1 to the declaration of Robert Simon, identified by Max as its lead software

engineer, Max appears to have used a particular source code repository product called "git," which is

an open source and freely available repository tool.[2]

9.   The "git" repository software includes a "clone" operation that can make a complete native

copy of a repository with very little effort. The "clone" operation typically executes quickly, and a

developer could execute this command many times with comparatively little effort.

10.   Based on my own experience using "git," I would expect a developer with access to Max's

source code repositories to be able to clone all 91 of the repositories identified by Max in several

hours. These native repository files could then be put into a single, encrypted archive to facilitate

production. In total, I would estimate a single developer could prepare native copies of all 91

repositories for production in less than one day of effort.

11.   I would expect a typical developer to know how to use the "clone" command. The use of git

is widespread in the software development industry and is typically taught or required in many post-

secondary computer science programs. Moreover, any developer joining a project using a "git"

repository would typically need to execute the "clone" command in order to make a local copy of the

source code to work with.

B.   IT IS UNCLEAR WHICH OF MAX'S 91 REPOSITORIES WILL BE NECESSARY TO STAND UP
        PARTICULAR VERSIONS OF THE HAPTIC SOFTWARE

12.   For the purposes of this proceeding, it may be necessary to "stand up" one or more versions

of the Haptic software for analysis. In this context, "standing up" software refers to the process of (1)

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[2] See, e.g., Declaration of Robert Simon ISO Motion for Preliminary Injunction and Seizure Order, Exhibit 1 (listing
various repositories as having been hosted on "Github," an online service for hosting "git" repositories; this exhibit
also indicates that certain repositories were migrated to "Azure DevOps," another online service hosting "git"
repositories).

converting human-readable source in to machine-readable software in binary format (*i.e.*, "binaries")

that can be executed by a computer system and (2) configuring any software or systems necessary to

run these binary files.

13.   Standing up the software may be necessary to identify non-literal elements of the Haptic

software that may have been derived from earlier software created by TEG that I understand was

demoed to Max prior to the parties' relationship. Such non-literal elements might include workflows,

module designs, or other elements that would be difficult to discern by analyzing only the parties'

source code.

14.   I understand Max takes the position that only certain of its repositories are relevant to this

proceeding. Specifically, Mr. Simon claims in his declaration that only four of 91 Max repositories

should be considered relevant: "haptic-admin," "haptic-backend," "haptic-client," and

"haptic_demo."[3]

15.   However, one distinct possibility is that some of the other 87 repositories identified by Max

may be "dependencies," which contain source code for components necessary to stand up different

versions of the Haptic software. Such dependencies may include widgets, plugins, libraries, or user

interface components used to create the Haptic software as a whole.

16.   Mr. Simon does not address this possibility in his declaration and in fact admits that he does

not know what the purpose is of most of these repositories.[4] If these repositories include

dependencies used to build the early versions of the Haptic software, it will not be possible to stand

up the Haptic software without them.

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[3] Motion for Modification or Clarification, p. 3 (citing Declaration of Robert Simon ISO Motion for Preliminary Injunction and Seizure Order, ¶ 12, which states "The only relevant source code repositories listed on my chart are the four repositories numbered 5 ('haptic-admin'), 6 ('haptic-backend'), 7 ('haptic-client'), and 21 ('haptic_demo')").

[4] *See* Declaration of Robert Simon ISO Motion for Preliminary Injunction and Seizure Order, Exhibit 1 at rows 26, 27, 29-35, 37-39, 41-46, 50-74, 76-78, and 80-83 (describing each repository as corresponding to "[a] legacy widget of unknown purpose").

17.   Moreover, the names of these repositories suggests that Mr. Simon's assessment that only

four of these 91 repositories are necessary is erroneous. As a representative example, repositories #11

("haptic-room") and #12 ("haptic-room-electron") are listed as containing components of the Haptic

software that date back to 2020 and were mature enough in their development to be released to

customers.[5] As further examples, repositories #24 ("haptic-hello") and #25 ("haptic_home"), which

date back to 2020 and 2019, respectively, are identified by Mr. Simon as containing intermediate

versions of Haptic software components that were under development at that time.[6]

18.   Any of these repositories, even if now obsolete, not ultimately released to customers, or only

in an "experimental state," may provide evidence of designs, functionality, or other attributes that

demonstrate evidence of TEG's assertion that it is a co-owner of the software at issue in this

proceeding. Such determinations can only be made by analysis of the source code in these

repositories.

C.   **MAX'S PROPOSAL TO LIMIT REVIEW OF ITS SOURCE CODE TO A "HIGHLY CONTROLLED
       ENVIRONMENT" IS CONTRARY TO TYPICAL PRACTICE AND WILL LIMIT HOW THE SOURCE CODE
       CAN BE ANALYZED**

19.   I understand Max takes the position that potential disclosure of certain of its repositories

would be "devastating to Max" as it would "disclose trade-secrets and development work for

products other than Haptic Federal."[7] Max further takes the position that full review of these

repositories would only be acceptable in a "highly controlled environment on a computer

unconnected to the internet [*sic*] and disconnected from a printer or any a means copying [*sic*]

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[5] *See* Declaration of Robert Simon ISO Motion for Preliminary Injunction and Seizure Order, Exhibit 1 at rows 11
and 12 (listing a "Maturity Level" for these repositories as "Release," which typically indicates software ready to be
used by a customer).

[6] *See* Declaration of Robert Simon ISO Motion for Preliminary Injunction and Seizure Order, Exhibit 1 at rows 24
and 25 (stating, in row 25, for example, that "[t]his repository contains an intermediate work product form August
and September 2019.").

[7] Motion for Modification or Clarification, p. 3 (citing Declaration of Robert Simon ISO Motion for Preliminary
Injunction and Seizure Order, ¶ 12, which states ("Disclosure of the complete native source code repository with all
branches and all revision history of the remaining three (3) repositories would be devastating to Max.")

code."[8]

20.   In my own experience in more than 100 disputes over source code and software, many

dozens of which involve allegations of trade secret misappropriation, such provisions are both

atypical, unnecessary, and inhibit expert analysis. In all but a handful of cases, production has been

handled by requiring experts to sign a protective order, which typically includes provisions for

designating source code as highly confidential material under an "Attorney's Eyes Only"

designation.

21.   Once experts have signed such an order, source code has been encrypted and sent directly to

experts for review and analysis, including through (1) direct download of an encrypted archive via a

file sharing website, (2) encrypted hard drive, or even by (3) sending a locked down computer system

containing the source code (with either just the source code or the entire computer system being

encrypted).

22.   I understand the court has entered an Amended Stipulated Protective Order, which I have

reviewed, which provides for the protection of the source code. I have already signed the undertaking

agreeing to be bound by its terms.

23.   Restricting source code to a review computer substantially limits what kinds of analysis an

expert can do and how much effort can be applied in such analyses. For example, one analysis that

would likely be useful here would be system testing, in which a running version of the software is

stood up and examined. Standing up the Haptic Federal software testing for functional testing would

likely be impossible without access to the Internet, as most modern software development tools

require such a connect to download required third-party components on demand when a developer

attempts to build the software. Such problems would be further burdened by the logistical and time

constraints imposed by requiring in-person review in a "highly controlled environment" as suggested

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[8] Motion for Modification or Clarification, p. 3.

by Max.

24.   In any case in which the source code for two software products must be compared, typical

practice is to use software to programmatically compare these sets of source code files. This

approach is exactly what Max's expert, Robert Zeidman, applied in forming the opinions proffered in

his expert report.[9]

25.   In accordance with 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is

true and correct. Executed this eighth day of October 2024, in North Bethesda, MD.

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Nick Ferrara

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[9] *See, e.g.*, September 4, 2024 Expert Report of Robert Zeidman, ¶¶ 25-26 ("I ran the HTML Preprocessor function of CodeSuite [one of Zeidman's proprietary code analysis tool] on the (Angular Template) HTML files to give the files identical formatting. ... I then ran the CodeDiff function of CodeSuite on the HTML and TypeScript files for an exhaustive comparison between all TypeScript and Angular Template files.")